

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) Publication number:

0 324 276 A3

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: **88312319.2**

(22) Date of filing: **23.12.88**

(51) Int. Cl.⁵: **H01L 39/24**, C04B 35/50,
C04B 35/60, C04B 35/50,
H01L 39/12

(30) Priority: **23.12.87 BR 8707200**

(43) Date of publication of application:
19.07.89 Bulletin 89/29

(84) Designated Contracting States:
CH DE ES FR GB GR IT LI NL SE

(88) Date of deferred publication of the search report:
10.04.91 Bulletin 91/15

(71) Applicant: **PIRELLI S/A COMPANHIA
INDUSTRIAL BRASILEIRA**
Al. Barao de Piracicaba, 740
Sao Paulo(BR)

Applicant: **FUNDACAO UNIVERSIDADE
FEDERAL DE SAO CARLOS**
Via. Washington Luiz, Km 235
Sao Carlos(BR)

Applicant: **UNIVERSIDADE DE SAO PAULO**
R. da Reitoria, 109 Cidade Universitaria
Sao Paulo(BR)

(72) Inventor: **Vellego, Geni**
R. Acurema, 130
Sao Paulo - SP -(BR)
Inventor: **Filipini, Cesar Augusto**
R. Croata, 427, ap. 51
Sao Paulo - SP -(BR)
Inventor: **Filho, Pedro Iris Paulin**
R. Roberto de Jesus Affonso, 1341
Sao Paulo - SP -(BR)
Inventor: **Canevarolo, Sebastiao Vicente, Jr.**
R. Major Jose Inacio, 2684
Sao Carlos -SP -(BR)
Inventor: **Serra, Oswaldo Antonio**
Chacara Ipe, Cx. Postal 1341
Ribeirao Preto - SP -(BR)

(74) Representative: **Marlow, Nicholas Simon et al**
Reddie & Grose 16, Theobalds Road
London WC1X 8PL(GB)

(54) **Synthesis of superconductors from xenotime.**

(57) A superconductor of the type $AM_2Cu_3O_x$, in which x is about 7 and M is an alkaline earth, is obtained by alkaline melting of xenotime and melting of the product with an alkaline earth and copper oxide.

EP 0 324 276 A3



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 7)
Y	JAPANESE JOURNAL OF APPLIED PHYSICS vol. 26, no. 8, August 1987, pages L1272-1273; T. Komatsu et al.: "Crys- talline Phases in Superconductor Ba- Y-Cu-O with High Tc prepared by Mel- ting Method" * abstract; page L1272, column 1 *	1,5,6	H01L39/24 C04B35/00 C04B35/60 C04B35/50 H01L39/12
Y	GB-A-1223682 (REYNOLDS HOLDING) * page 1; page 3, column 2, line 125 - page 4, column 1, line 35 *	1,5,6	
A	US-A-4238467 (M. DUGAN et al.) * claims *	2	
			TECHNICAL FIELDS SEARCHED (Int. Cl. 7)
			H01L C04B
The present search report has been drawn up for claims 1,2,5,6			
Place of search Berlin		Date of completion of the search 05.09.1990	Examiner A. JUHL
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			



CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claims:
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

X LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1,2,5,6:
Superconductor and method using xenotype
2. Claims: 3,4:
Separating rare earths in xenotype

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☒ None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims: 1, 2, 5, 6